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NPIC/R-8/61
October 1961

PHOTOGRAPHIC INTERPRETATION REPORT

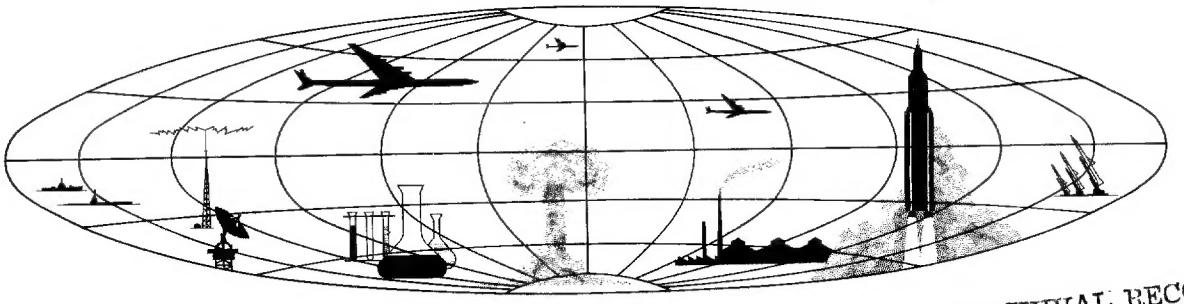
KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER, USSR

CHANGES [redacted] 25X1D

ARMY NAVY AIR FORCE CIA

[redacted] 25X1

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER, USSR

CHANGES [redacted] 25X1D

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NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

PREFACE

This report, prepared at the National Photographic Interpretation Center in response to CIA requirement OSI/R-76/61, reports on the [redacted] photographic coverage of the Kapustin Yar/Vladimirovka Missile Test Center, and confines itself primarily to new developments within the center [redacted] photography [redacted] was used to update information derived from [redacted] photography [redacted] Publications dealing with the [redacted] coverage are listed in the References at the end of this report.

Although the [redacted] photography covers the entire Kapustin Yar Rangehead, clouds cover up to 95 percent of the rangehead. Some areas are cloud covered on all missions. The small scale and lack of image definition inherent in the photography limit detailed analysis. Accordingly, most of the mensural data included are only approximate. The term "miles" used throughout this report means nautical miles, and all directions are referenced from true north.

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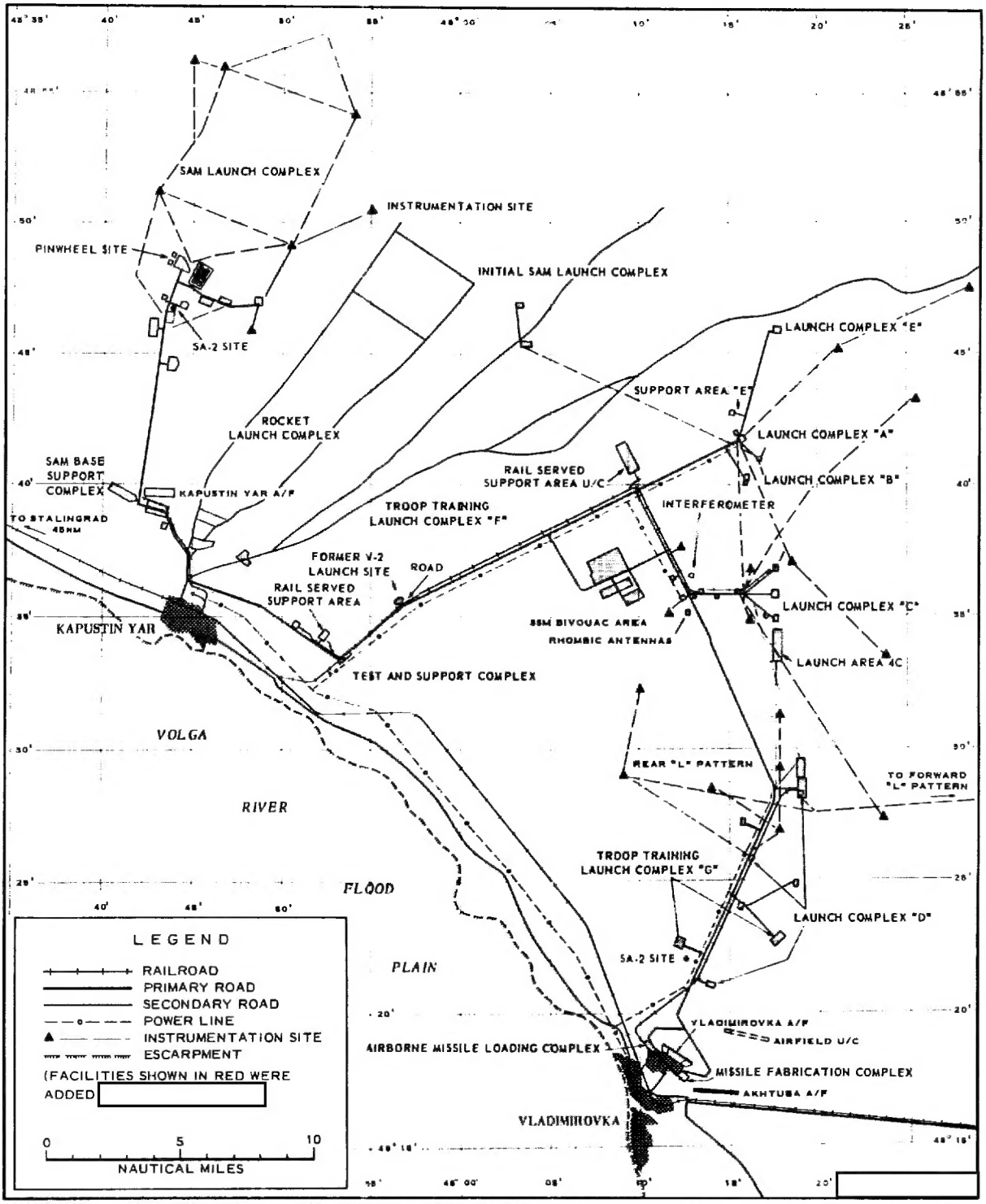

FIGURE 1. KAPUSTIN YAR/VLADIMIROVKA RANGEHEAD. Red overprint shows areas which are new since photography.

25X1D

25X1D

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INTRODUCTION

25X1D The [redacted] photography of the Kapustin Yar/Vladimirovka Missile Test Center (48-34N 45-53E) 25X1D shows continuing expansion of the center [redacted] 25X1 [redacted] (Figure 1). The major expansion observed is at Launch Complex "C," where a new launch area is under construction. Another significant addition is a rail- and road-served support area under construction along the road from Kapustin Yar to Launch Complex "A." A surface-to-air missile (SAM) launch site, new [redacted] 25X1D is under development, and two operational SA-2 SAM sites have been added to this 25X1D range [redacted] These areas are discussed first in this report and the other areas with fewer changes follow.

25X1D Although some changes were noted on [redacted] coverage, it is used mainly as a time base reference to report on construction progress.

LAUNCH COMPLEX "C"

25X1D The [redacted] missions provided partial coverage of this complex. The complex was completely cloud covered on the [redacted] 25X1D [redacted] 25X1D photography.

The most significant item identified, [redacted] 25X1D was a new launch area under construction (designated Launch Area 4C).

25X1D The rail line under construction [redacted] from Checkout and 25X1D Assembly Area 2C was being extended to Launch Area 1C [redacted]

25X1D Poor weather on the [redacted] missions makes a comparison of individual facilities impossible. Therefore, in most cases 25X1D comparisons are made with the status as of the [redacted] photography, on which all facilities in the complex were cloud free.

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25X1 The accompanying table shows the weather conditions of the comparative coverages on [redacted] photography at the individual facilities in the complex. Clouds and cloud shadow prohibit detailed analysis of many of these facilities.

Table 1. Comparative Coverage of Launch Complex C.

Facility		Remarks
Launch Areas		
1C		Rail line u/c to Launch Area 1C
2C		No report
3C		No change [redacted]
4C		New Launch Area u/c
Support Facilities		
Assembly Area 1C		No change [redacted]
Assembly & Checkout 2C		Rail line u/c to Launch Area 1C
Assembly Area 3C		No change
Checkout Area 1C		No change
Checkout Area 3C		No change
Admin & Housing Area		No change
Unidentified Area		Minor buildup [redacted]
Electronics Facilities		
Site C1		No change
Site C2		No change
Site C3		No report
Site C4		No change
Site C5		No change
Rhombics		New communications control center
Interferometer Site		New interferometer
Bivouac Area		Approximately 30% increase in area [redacted]

*Weather abbreviations: cc-cloud covered, sc-scattered clouds, cs-cloud shadow, cl-clear.

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Launch Areas

25X1D Although there has been no change in Launch Area 1C [redacted]
25X1D [redacted] the rail line under construction [redacted] was being ex-
25X1D tended to this launch area. Launch area 1C may serve as a point at which rail-mobile launch systems will be developed. This system may utilize developed missiles and only the handling and ground support equipment may be undergoing research and development. Ground scarring indicates that the field troop-training sites north of the launch area have been
25X1D active, but no sites in addition to the four present [redacted] seem to have been constructed.

25X1D Launch Area 2C has not been observed [redacted] There
25X1D is no apparent change in Launch Area 3C [redacted]

25X1D A new launch area (4C) in an early stage of construction was identified at Launch Complex "C" (Figure 2) on the [redacted] photography. Partial cloud cover and cloud shadow preclude a detailed analysis. The area is 2,100 feet south of Launch Area 3C and in line with the four existing launch pads at Complex "C." The area is served by an improved road which branches south from the service road for Launch Area 3C. The point of intersection is obscured by clouds but when the road is projected it intersects northwest of Checkout Area 3C. The south terminus of the road is also obscured by clouds. A road approximately 1,200 feet long branches off to the east to serve the launch area. Another new road, just to the west, leads south toward Vladimirovka.

Because of ground scarring, only one fence can definitely be identified. Two scars perpendicular to this fence line, one to the north and one to the south, probably indicate the other fence lines. Combined, these scars enclose an area of approximately 3,800 by 1,000 feet.

This new launch area resembles Launch Area 2C. It appears to be rectangular in shape, but is more than twice the length and about the same width as 2C (2C measures 1,700 by 1,200 feet). About 750 feet from the north fence line is a possible pad under construction. Its ultimate size

and configuration cannot be determined at present. Two pairs of parallel objects west of the pad and oriented at right angles to the fence line could be counterparts of the vehicle stalls abutting the pads at Launch Area 2C.

If another pad were located 750 feet in from the south fence (this point is obscured by cloud and cloud shadow), the distance between pads would be 2,300 feet. This is an unusually great distance to separate pads as evidenced by techniques employed at the Kapustin Yar Missile Test Center in the past few years. If two other pads were evenly spaced in the 2,300-foot expanse, the four pads would be separated by about 800 feet on center. The pads at 2C are separated by a distance of 850 feet on center.

There are 14 buildings, ranging from 60 to 100 feet located west of the access road approximately 3,000 feet north of the service road to the launch area. No other buildings can be identified in the immediate area.

Another area of activity is located farther south. The access road passing Launch Area 4C terminates under the cloud. The only recognizable feature other than an extensive amount of ground scarring is a probable road, oriented approximately north-south and in alignment with the existing launch pads of this complex.

A straight ground scar, probably a covered ditch, leads south from the gate of the launch area. It appears to connect near the power line along the road behind Launch Complex "D." A diamond-shaped ground scar is located about 500 feet north of the launch area.

No instrumentation ground patterns were identified.

Support Facilities

The only significant addition to the support facilities at Launch Com-
25X1D plex "C" [redacted] is the extension of the rail line from As-
sembly and Checkout Area 2C (Figure 1) [redacted] the line appeared
25X1D to terminate at the Complex Control Center. It has since been extended to Launch Area 1C where it terminates.

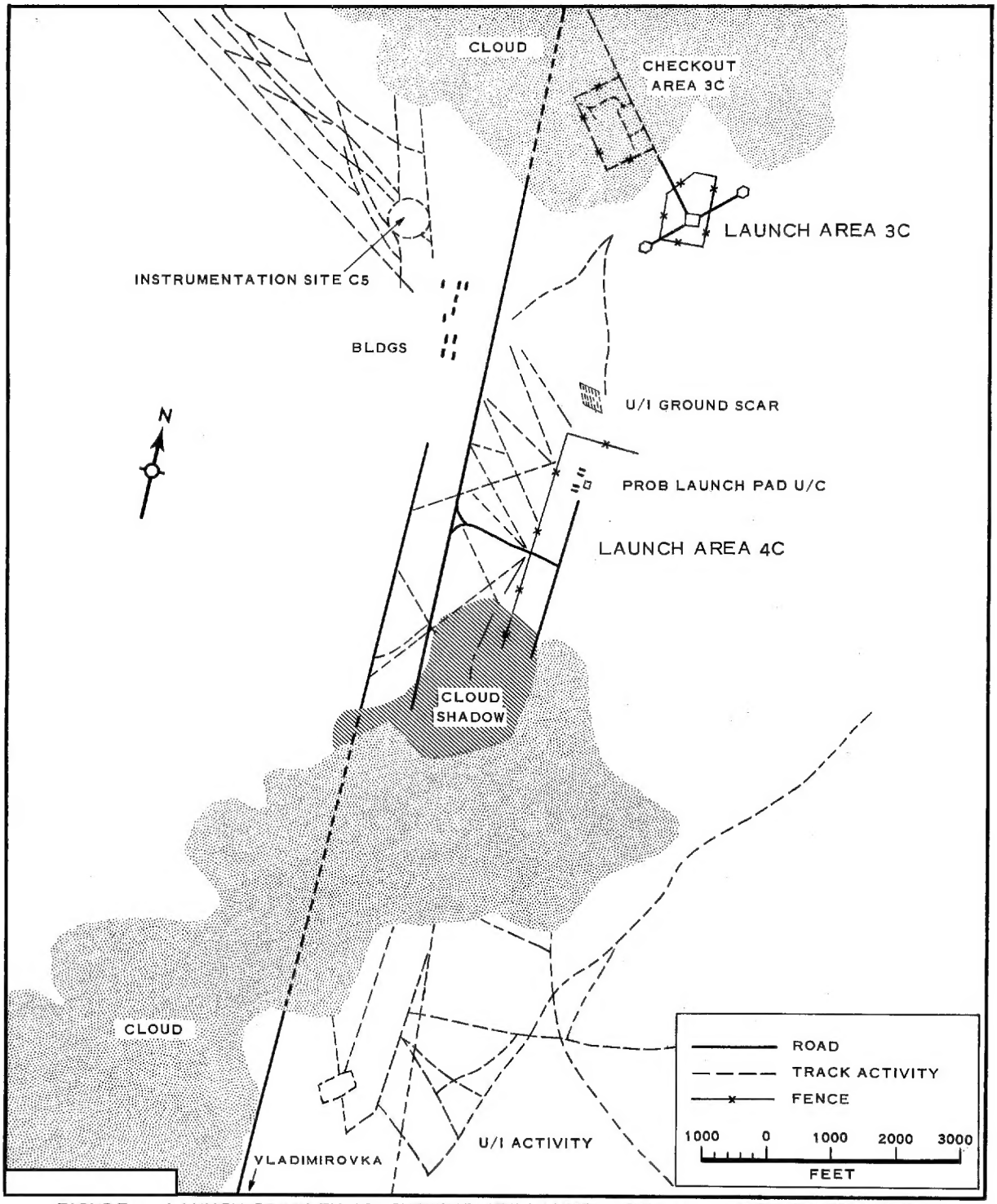


FIGURE 2. LAUNCH COMPLEX "C" SHOWING NEW LAUNCH AREA (4C) UNDER CONSTRUCTION.

25X1

An area of building activity (Figure 1) located approximately 4,000 feet north/northwest of the Administration and Housing Area now appears 25X1D to be complete [redacted] photography indicates that only four buildings 25X1D have been added [redacted] This makes a total of 17 buildings in the area.

No changes were observed at the other support facilities. Table 1 provides a comparative analysis of the individual support facilities.

Electronics Facilities

25X1 None of the instrumentation sites visible on [redacted] photography 25X1 appear to have changed since [redacted] photography [redacted] 25X1D Due to the small images of these sites, however, it is probable that only major expansion could be seen on this later photography.

A new, probable communications control center has been constructed 25X1D immediately south of the rhombic antenna field identified [redacted] 25X1D [redacted] This facility appears to be fenced and measures about 1,000 by 200 feet. Only one building can be identified within the fenced area.

An interferometer site (Figure 1), believed to be under construction 25X1D [redacted] can now be confirmed. This site, together with the fenced facilities immediately to the north, has been designated the Range Instrumentation Site. It is discussed here because of its proximity to Launch Complex "C," although it probably serves all the launch complexes. It is east of the main access road and the branch spur rail line, and approximately 8,000 feet north of the Administration and Housing Area. In 25X1D [redacted] it contained not only the interferometer site in the early stage of construction but also two fenced areas. Combined, these areas contained approximately 10 buildings, inclucing a 20-foot domed silo with 25X1D a [redacted] building, 5 vans, and several miscellaneous items such as buried tanks and various types of vehicles. Since this portion of the 25X1D site is obscured by clouds and haze, no expansion [redacted] can be determined.

Bivouac Area

25X1D [redacted] the bivouac area (Figure 1) was divided into seven distinct areas which were each set off by a plowed strip. These strips were neither uniform in configuration nor equal in size. At that time a total of approximately 800 square tent bases could be identified. No permanent facilities such as buildings or structures were identified.

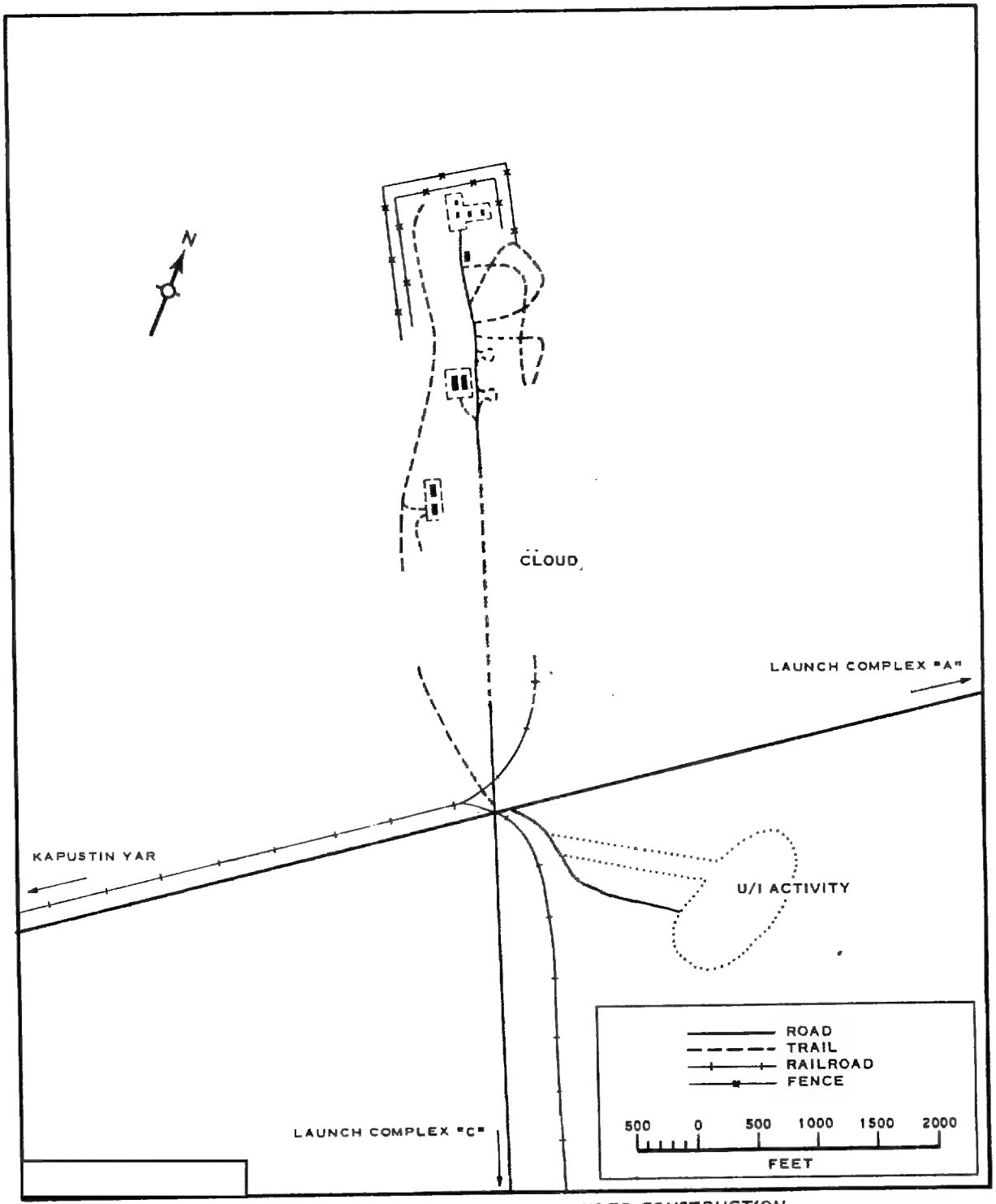
Some increase to the overall area and an extensive amount of track activity have occurred since then. At least eight buildings, approximately 60 feet long, have been constructed adjacent to and east of the bivouac area. Since the individual tent sites cannot be identified on photography of this scale, the only indicator to buildup in the area would be the ground scarring, which indicates an approximate 30 percent increase in area. There is an almost unlimited area for expansion.

NEW SUPPORT AREA UNDER CONSTRUCTION

25X1D [redacted] a new construction project was observed on the north side of the road that runs from Kapustin Yar through to Launch Complex "E" at the junction of the road from Vladimirovka. The project appeared to be in the very early stages at the time of photography and nothing could be said about it.

25X1D [redacted] however, the construction project was well underway and a definite pattern had developed (Figure 3). The rectangular area measures approximately 2,500 by 1,100 feet. A spur from the rail line that terminates at Launch Complex "C" branches at the road junction and serves the new installation. The terminus cannot be seen due to cloud shadow. A paved road also enters the installation from the intersection.

The installation is in the process of being double-fenced and at least nine buildings can be identified within the fenced area. Two buildings which appear to be the most important are offset to the west of the paved



25X1

FIGURE 3. NEW SUPPORT AREA UNDER CONSTRUCTION.

road. They may be on concrete hardstands and appear to be drive-through type. No specific function can be assigned to any of the buildings or to the installation itself.

25X1D The installation was completely cloud covered on the [redacted] photography.

SAM FACILITIES

25X1D [redacted] the entire Surface-to-Air Missile facilities (Figure 1) were covered with only 5 percent cloud cover. There has been little change since PIC/JR-14/60.* A new building and area of construction activity were noted in the northwest and southwest corners respectively of the Research and Development Launch Area. Instrumentation Control Site No 8 was improved with a firebreak and a fence added. No other changes were noted.

25X1D The area was partially covered by cloud-free photography [redacted]
25X1D [redacted] Only the actual launch areas were covered. A new instrumentation site was constructed 5.5 nm northeast of the SA-3 launch area and connected by road and/or cable to Instrumentation Site No 4 on the SAM Test Range. No other changes were noted.

25X1D Ninety-five percent of the SAM facilities were covered by 90 percent cloud-free photography [redacted] A new SAM launch site had been constructed adjacent to the northwest fence of the Research and Development Launch Area. It appeared to be a six-launcher pinwheel-type site,
25X1D but, although this site was barely visible [redacted] not enough could be seen to identify it as such. Other unidentified activity was in progress just north of and adjacent to the northwest fence line. An operational SA-2 site had been constructed between the Yo-Yo guidance site and the support
25X1D area [redacted] No other activity was noted within the SAM area.

* See references.

OTHER AREAS

Portions of the rangehead which showed less significant or no changes are grouped in this section. Those areas that showed some change are discussed separately; the others are merely mentioned. The changes discussed are illustrated in Figure 1.

25X1 Launch Complex "B" was completely cloud covered on the [redacted]
25X1D [redacted] photography. On the [redacted] mission, over 60 per-
25X1D cent cloud cover, together with haze and cloud shadow, make interpretation impossible.

25X1 The small scale of the [redacted] photography makes it impossible even to identify individual sites at Troop Training Launch Complex "F".

25X1D No changes were seen at the Initial SAM Launch Complex on [redacted]
25X1D [redacted] photography and the complex was cloud covered
25X1D [redacted] The same is true of the Airborne Missile Loading Facility.

The major portion of the Kapustin Yar Base Support Complex was
25X1D covered by cloud-free photography [redacted] but no changes could
25X1D be identified. The support complex was not covered by [redacted] photog-
25X1D raphy. No changes could be seen at the complex [redacted] when it was covered by partially hazy photography.

Launch Complex "A"

25X1D On the [redacted] photography, clouds and cloud shadow obscured 50 percent of this complex. The launch areas were not discernible, and the support area was 40 percent cloud covered. Two of the four tracking stations of the modified "V" configuration were visible. There were no
25X1D apparent changes [redacted]

25X1D Clouds and cloud shadow on the [redacted] coverage also obscured 50 percent of the complex. Both launch points were cloud covered, and approximately 30 percent of the support area was cloud covered. Only

one of the four tracking sites of the modified "V" configuration was visible. There were no observable changes.

25X1D The complex was entirely cloud covered on the [redacted] photography.

Launch Complex "D"

25X1D On the [redacted] photography, Launch Complex "D" was 85 percent cloud covered; all four launch points were completely cloud covered. The Range Control Center and Support Area were 70 percent cloud covered, with the Radar Facility, Rear "L" Pattern, Linear Pattern, and Assembly and Checkout Area visible, but no apparent change in any of the areas.

25X1D In [redacted] Launch Complex "D" was 25 percent cloud covered, with the remaining 75 percent in cloud haze. Three of the four launch points were visible through the haze and there appeared to be no change.

The Linear Pattern, Range Control Center, and Logistical and Administrative Support Area were visible through haze, with no apparent change. The Assembly and Checkout Area was cloud free, with no change. The radar facility was cloud covered.

25X1D On [redacted] photography, Launch Complex "D" was entirely cloud covered except for the launch areas, which were barely visible through heavy haze. There appeared to be no change.

Launch Complex "E"

25X1D On [redacted] Launch Complex "E" was cloud free, with no change since the last report (PIC/JR-21/60).*

25X1D In [redacted] Launch Complex "E" was cloud covered. However, a new housing and support area had been identified on the west side of the main road from Launch Complex "A" to Launch Complex "E." It is located at the terminus of a branch road, approximately one nm from the

* See references.

Launch Complex "A" housing and support area. Although small scale and cloud shadow inhibit detail, it appears that this support and housing area for Complex "E" has approximately the same size and configuration as the one for Complex "A."

25X1D Launch Complex "E" was 100 percent cloud covered on [redacted] photography.

Launch Complex "G"

25X1 Launch Complex "G" has undergone relatively few changes [redacted]
25X1D [redacted] The most significant item revealed [redacted] was
25X1D the completion of the launch pads at Launch Area 1G. The most significant
25X1D item noted [redacted] was the inclusion of an SA-2 SAM site adjacent to the Motor Pool and Equipment Park. The complex was completely cloud covered on the [redacted] photography.

25X1D No comparison can be made between [redacted]
25X1D coverages, since each of the facilities of the complex was cloud covered on
25X1 [redacted] these missions. Hence, all comparisons are made with
25X1D [redacted] photography.

A detailed analysis of the complex may be found in CIA/PIC/JR-1006/61. *

Launch Areas

25X1D Both launch areas were completely cloud covered on [redacted] photog-
25X1D raphy [redacted] photography, however, revealed that the two launch pads at Launch Area 1G were probably complete. This mission confirmed the predicted pad configuration illustrated in PIC/JR-1006/61. The short section of road under construction leading east from the Housing Area does extend to Launch Area 1G as speculated in the same report.

* See references.

25X1 The small scale of the [redacted] photography precludes interpretation of details at Launch Area 2G. Individual sites are not evident.

Support Facilities

The Support Facilities consist of the Missile Storage and Handling Areas, the Motor Pool and Equipment Park, the Transloading Area, and the Housing Area. There has been no apparent change in these facilities [redacted] 25X1D

Rocket Launch Complex

The major portion of the Rocket Launch Complex was cloud free in [redacted] 25X1D and shows expansion [redacted] 25X1D A new area, located 0.5 nm northeast of the old positions, contains at least four buildings, but small scale precludes any definite interpretation.

Only a portion of the Rocket Launch Complex had cloud-free coverage [redacted] 25X1D The new portion was not covered and no new areas were identified. The complex was partially cloud covered [redacted] 25X1D No changes [redacted] 25X1D were noticed. Small scale precludes further details.

Former V-2 Launch Site

25X1D The former V-2 Launch Area was 5 percent cloud covered [redacted] 25X1D [redacted] A graded road was observed leading from the main service road that runs from Kapustin Yar to Launch Complex "A." The road appeared to serve an existing tracking site that was associated with V-2 launchings. Small scale precludes interpretation.

25X1D The complex was cloud free [redacted] and the new road appeared to be paved. Some new activity appeared to be taking place at the terminus of

this road, at the old V-2 tracking site; however, small scale precludes interpretation.

25X1D The complex was completely cloud covered on [redacted] photography.

Test and Support Complex

25X1D The Test and Support Complex was cloud free on [redacted] photography and a new rail-and road-served support area was built on the north side and adjacent to the rail line from Kapustin Yar to the Test and Support Complex (Figure 1). The area is enclosed by a fence, which measures 1,200 by 700 feet. Before the rail line enters the area it bisects and appears to serve two units within the fenced area. Construction activity extends on both sides of this new area. The small scale precludes interpretation of
25X1 this new area. The remainder of the complex appears to be the same as
25X1D viewed on [redacted] photography [redacted]
25X1D [redacted] photography of the complex was clear, but no new activity
25X1D was noted. The complex was cloud covered [redacted]

Missile Fabrication Complex

25X1D The entire area was covered by cloud-free photography [redacted]
25X1D The second large fabrication building, which was under construction [redacted] appeared to be completed. This new building is similar to the earlier building with sawtooth roof construction and measures approximately 500 by 220 feet. No other changes were noted.

25X1D No apparent changes were observed on hazy photography [redacted]
25X1D The complex was completely cloud covered [redacted]

Vladimirovka Base Support Complex

25X1D The Vladimirovka Base Support Complex was covered by cloud-free photography [redacted] Changes were limited to a few new buildings in the housing area.

25X1D The entire complex was covered by practically cloud-free photography [redacted] New construction was underway north of the road from Vladimirovka airfield to the old village of Vladimirovka. The rail line from Kapustin Yar to Vladimirovka divides the area in two. Along the road from the rail line to the airfield are as many as 15 new buildings.

A new airfield is under construction 2 nm east-northeast of the main runway. The runway is being surfaced, with 12,000 feet completed, but its ultimate length cannot be determined. No other changes were noted.

25X1D The complex was 100 percent cloud covered [redacted]

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